

Metal-organic Frameworks: Global Markets

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Abstracts

Report Scope:

This report provides an updated review of metal-organic frameworks, including materials and production processes, and identifies current and emerging applications for these products.

BCC Research delineates the current market status for metal-organic frameworks, defines trends, and presents growth forecasts for the next five years. The MOF market is analyzed based on the following segments: metal node type, composition, configuration, shape, application, and region. In addition, technological issues, including key events and the latest developments, are discussed.

More specifically, the market analysis conducted by BCC Research for this report is divided into five sections.

In the first section, an introduction to the topic and a historical review of MOF technology are provided, including an outline of recent events. In this section, current and emerging applications for MOFs are also identified and grouped in segments (chemical/petrochemical/environmental, energy, sensors and instrumentation, life sciences, electronics and optoelectronics, and others).

The second section provides a technological review of metal-organic frameworks. This section offers a detailed description of MOF materials, their properties, configurations, and typical fabrication methods. This section concludes with an analysis of the most important technological developments since 2017, including examples of significant patents recently issued or applied for. The chapter ends with an highlight of the most active research organizations operating in this field and their activities.

The third section entails a global market analysis for metal-organic frameworks. Global revenues (sales data in millions of dollars) are presented for each segment (metal node type, composition, configuration, shape, application, and region), with actual data referring to the years 2018 and 2019, and estimates for 2020. Revenues are at the manufacturing level.

The analysis of current revenues for metal-organic frameworks is followed by a detailed presentation of market growth trends, based on industry growth, technological trends, and regional trends. The third section concludes by providing projected revenues for metal-organic frameworks within each segment, together with forecast CAGRs for the period 2020 through 2025. Projected and forecast revenue values are in constant U.S. dollars, unadjusted for inflation.

In the fourth section of the study, which covers global industry structure, the report offers a list of the leading suppliers of metal-organic frameworks, together with a description of their products. The analysis includes a description of the geographical distribution of these firms and an evaluation of other key industry players. Detailed company profiles of the top players are also provided.

The fifth and final section includes an analysis of recently issued U.S. patents, with a summary of patents related to MOF materials, fabrication methods, and applications. Patent analysis is performed by region, country, assignee, patent category, material type, and application.

Report Includes:

50 data tables and 36 additional tables

An overview of the global markets for metal-organic frameworks (MOFs) within the highly porous polymeric materials segment

Analyses of global market trends with data corresponding to market size for 2018-2019, estimates for 2020, and projections of compound annual growth rates (CAGRs) through 2025

Detailed review of metal-organic frameworks, focusing on material chemistry, properties, configurations, fabrication technologies and applications

Estimation of current market size and market share analysis of MOFs by

material chemistry, composition, configuration, shape, application, and region, with growth forecasts through 2025 for each market segment

Insight into the fabrication processes for these organic-inorganic materials, and discussion of major manufacturing and technical issues

Opportunities and highlights of this innovation-driven materials market, and the major regions and countries involved in market developments

Emphasis on the current research and development activities related to MOFs resulting in the issuance of patents, and identification of key industry players and their competitive landscape

A relevant patent analysis for metal-organic frameworks and summary of the recently awarded U.S. patents along with their general trends

Profiles of the leading companies active in the global market, including BASF, NanoResearch Elements, Matrix Sensors, Samsung Electronics and Strem Chemicals

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